

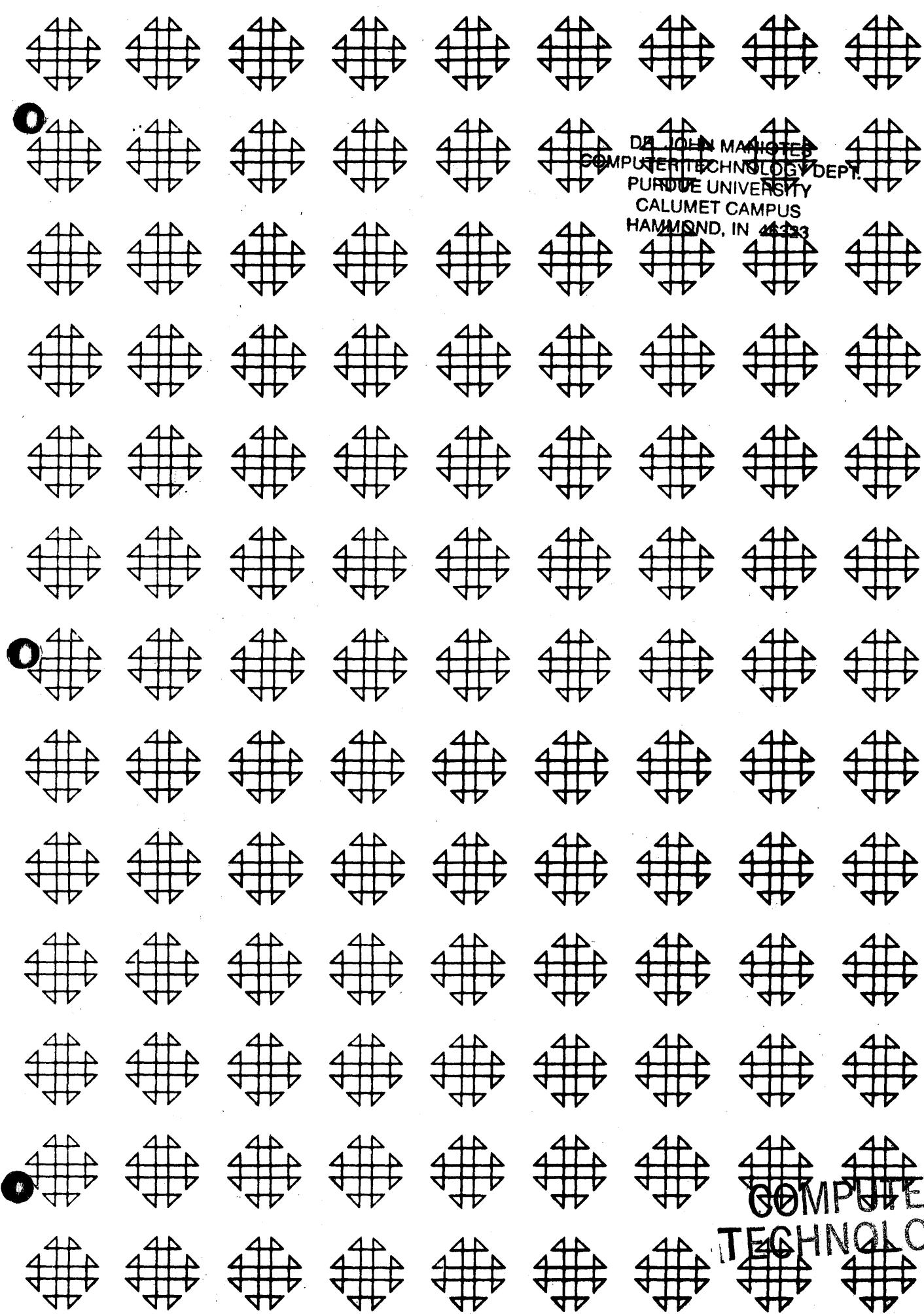
**1620 GENERAL PROGRAM LIBRARY**

University of Mississippi Test Scoring  
Program (UMTS) Version A

13.0.031

**COMPUTER  
TECHNOLOGY**

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COMMON USERS GROUP PROGRAM REVIEW AND EVALUATION  
(fill out in typewriter, ink or pencil)

Program No. \_\_\_\_\_

Date \_\_\_\_\_

Program Name: \_\_\_\_\_

1. Does the abstract adequately describe what the program is and what it does? Yes \_\_\_\_\_ No \_\_\_\_\_  
Comment \_\_\_\_\_

2. Does the program do what the abstract says? Yes \_\_\_\_\_ No \_\_\_\_\_  
Comment \_\_\_\_\_

3. Is the description clear, understandable, and adequate? Yes \_\_\_\_\_ No \_\_\_\_\_  
Comment \_\_\_\_\_

4. Are the Operating Instructions understandable and in sufficient detail? Yes \_\_\_\_\_ No \_\_\_\_\_  
Comment \_\_\_\_\_  
Are the Sense Switch options adequately described (if applicable)? Yes \_\_\_\_\_ No \_\_\_\_\_  
Are the mnemonic labels identified or sufficiently understandable? Yes \_\_\_\_\_ No \_\_\_\_\_  
Comment \_\_\_\_\_

5. Does the source program compile satisfactorily (if applicable)? Yes \_\_\_\_\_ No \_\_\_\_\_  
Comment \_\_\_\_\_

6. Does the object program run satisfactorily? Yes \_\_\_\_\_ No \_\_\_\_\_  
Comment \_\_\_\_\_

7. Number of test cases run \_\_\_\_\_. Are any restrictions as to data, size, range, etc. covered adequately in description? Yes \_\_\_\_\_ No \_\_\_\_\_  
Comment \_\_\_\_\_

8. Does the Program meet the minimal standards of COMMON? Yes \_\_\_\_\_ No \_\_\_\_\_  
Comment \_\_\_\_\_

9. Were all necessary parts of the program received? Yes \_\_\_\_\_ No \_\_\_\_\_  
Comment \_\_\_\_\_

10. Please list on the back any suggestions to improve the usefulness of the program.  
These will be passed onto the author for his consideration.

Please return to:

Mr. Richard L. Pratt  
Data Corporation  
7500 Old Xenia Pike  
Dayton, Ohio 45432

Your Name \_\_\_\_\_  
Company \_\_\_\_\_

Address \_\_\_\_\_

Users Group Code \_\_\_\_\_

THIS REVIEW FORM IS PART OF THE COMMON ORGANIZATION'S PROGRAM REVIEW AND EVALUATION PROCEDURE. NONMEMBERS ARE CORDIALLY INVITED TO PARTICIPATE IN THIS EVALUATION.

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DECK KEY

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Basic

Deck 1	Object Deck for 20K
Deck 2	Object Deck for 40K
Deck 3	Object Deck for 60K
<hr/>	
*Optional	
Deck 1	Source Deck

\* Optional material will be forwarded only when specifically requested

Modifications or revisions to this program, as they occur,  
will be announced in the appropriate Catalog of Programs  
for IBM Data Processing Systems. When such an announce-  
ment occurs, users should order a complete new program  
from the Program Information Department.

#### PROGRAM ABSTRACT

TITLE: University of Mississippi Test Scoring Program (UMTS)  
Version A

SUBJECT CLASSIFICATION: 13.0

AUTHOR: Richard D. Ross

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University of Mississippi  
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DESCRIPTION: UMTS is a flexible means of scoring objective exams taken on mark sense cards. It features a card input and card output patterned after program number 13.0.028 by the same author. A numerical grade for each student is published along with a grade distribution (with mean and standard deviation) and an exam analysis--indicating how many choices per question. UMTS has the following additional features:

- (1) Allows multiplicity of correct answers.
- (2) Allows each answer to be weighted with a weight value from 1 to 5.
- \*(3) Allows omitted question numbers to be punched following the student's grade card.
- \*(4) Allows weight factor to be punched beside each question number on exam analysis output.
- (5) Allows identification to be punched in columns 76-80 of student's grade card.
- (6) Allows additional identification to be punched in columns 01-30 of first header card.
- \*(7) Allows blank cards to be read at any time.
- (8) Allows all key cards, alternate key cards, and weight cards to be read in random order.
- (9) Allows student answer cards to be read in random order.
- (10) Allows batch processing.

\* Indicates additions to program number 13.0.028.

The most important feature of UMTS is the speed of grading each student's exam. Given below is the speed of grading:

Number of Questions	Time in Seconds
50	.93
100	1.20
150	1.55
200	1.90
300	2.60
400	3.30
500	4.00

Because of the additions to program number 13.0.028 a maximum of 130 questions can be graded on 20K computers, 485 questions on 40K and 500 questions for 60K computers.

RESTRICTIONS/RANGE: No special instructions are required although TNF and/or Direct Divide can be used on computers that have these capabilities. The maximum number of questions that may be graded is 130 questions for 20K computers, 485 for 40K computers, and 500 questions for 60K computers.

EQUIPMENT SPECIFICATIONS: Memory 20K, 1622. No special instructions are required but indirect addressing is required. Memory 40K and 60K can be used if available.

ADDITIONAL REMARKS: SPS language processed by AFIT SPS (Program Number 01.1.023). Fixed point and non-relocatable. Running time is 1 1/2 seconds for 150 questions and 4 seconds for 500 questions. This program is written to handle 25 mark sense columns and split them in half putting questions 1-25 in the 9 to 5 positions and questions 26-50 in the 4 to 0 positions. However, each answer must be punched in a separate column for the computer so that a half-after-four time pick up was added to the mark sense punch to pick up coselectors and punch each question in a separate column. The most important feature of the program is the speed of calculations.

#### DESCRIPTION OF PROGRAM

#### RESULTS AND METHODS

UMTS is designed to grade objective examinations for a maximum of 130 5-choice questions for 20K machines, 485 5-choice questions for 40K machines, and 500 5-choice questions for 60K machines for 9999 students per exam. The program sets up a 10-digit constant for each question to be graded. This 10-digit constant is initialized to flag zeros (0 0 0 0 0 0 0 0 0 0) to represent the answers (EDCBAEDCBA). The only possible answer for any question is a 0, 1, 2, ..., 8 or 9. Hence, this constant can be set up to grade any question on any test.

To illustrate how this constant can be used, we will assume that we are on question 1 and there is a possibility of two answers that will be correct (A and C) and this question has a weight of 4 on the test. The 10-digit constant for question number 1 will then have the form of 0 0 0 0 0 0 4 0 4. Initially the weight of each question is assumed to be 1 and at any time a weight card is read in the card number determines which questions are to be weighted and if question number 1 was given a weight of 4, the computer would check all positions of the 10-digit constant for question 1 and change all non-flagged digits to the proper weight. If a question is to be left blank, the computer will fill in for the 10-digit constant 10

flagged record marks.

The address of the first position of each 10-digit constant has the address of XXXX0. Hence, by transmitting a digit to the zero position of the address, the computer can readily determine if the answer is correct, incorrect, or to be omitted. This check is determined by a non-flagged digit, flagged digit, and a record mark respectively.

All cards are read alphabetically and the first position of each alphabetic answer is checked for a digit to determine if the student has omitted the question. The program will accept double-punched columns for answers only if they are legal double-punched columns that can be read into the computer. In this case, the computer accepts the second character read as the answer and 95% of the time this will be the correct answer.

As each student's questions are graded, an exam analysis table is up-dated, and as the student's score card is punched, a grade distribution table is up-dated. The output that is obtained from this program is the student's score card, the grade distribution with cumulative frequencies and percentiles along with the number of tests given, mean, and standard deviation. This is followed by the table of choices made for each question which includes an asterisk beside the correct choice or choices for each question. For multiple section exams or multiple-course exams, the above information may be punched for each section, each course, and all courses totalled together.

The answer cards have appropriate header cards included so that they may be printed with an 80-80 407 board. A 9-punch is placed in column 1 of a single card for each group to permit skipping to a new page for each group (wiring first reading column 1 through correct coselectors to carriage skip on a 9, and also to non-print).

**SPECIAL INSTRUCTIONS:** Storage requirements are 19993 core positions for 130 questions, 39861 core positions for 485 questions and 40673 core positions for 500 questions. There are two labels in the source program (SIZE and NCARD) that give the maximum number of questions and maximum number of cards that will be used on the test. These cards should be altered before processing for your particular machine configuration. The source deck is available as an option. DIVD is a two digit constant that indicates whether or not your computer has Direct Divide and/or

TNF instruction. A zero (0) indicates that these instructions are available and a one (1) indicates that you do not have this instruction.

To change object deck:

- (1) Column 42 of card 39, change to a "1" if direct divide is not available.
- (2) Column 43 of card 39, change to a "1" if TNF is not available.

INPUT			
1.	Program Deck	15	"1" if the grade distribution and exam analysis is desired on <u>last card indicator</u> . Otherwise, a "0" or blank.
2.	Control Card	16	"1" if grade distribution on last card indicator is to be deleted. Otherwise, a "0" or blank.
	Card Columns	17	"1" if exam analysis on last card indicator is to be deleted. Otherwise, a "0" or blank.
1-2		18	"1" if name is to be omitted from output. Otherwise, a "0" or blank.
3-5	<u>Data</u>	20-24	Any data in columns 20-24 of header card will be punched in columns 76-80 of each student's output card. This could be used to give the percent of the final grade that this test will be and the test number or any other identification that is needed. Another possible use for this output is to put the instructor's initials or in some cases their last name. If left blank, nothing will be punched.
6-8	Number of cards per student.		
9	Number of questions on the exam.		
10	Number of questions not to be graded (this includes only those questions properly left blank).		
11	"0" or blank if the grade distribution and exam analysis by section is desired. Otherwise, a "1".		
12	"1" if the grade distribution by section is to be omitted. Otherwise, a "0" or blank.	26	"1" if omitted question numbers are not to be punched following the student's answer card. Otherwise, a "0" or blank.
13	"1" if the exam analysis by section is to be deleted. Otherwise, a "0" or blank.	27	"1" if weight value is not to be punched following the question number on exam analysis cards. Otherwise, a "0" or blank.
14	"1" if the grade distribution and exam analysis by course is desired. Otherwise, a "0" or blank.	31-60	Any information punched in columns 31-60 of the control card will be punched in columns 1-30 of the first header card. This can be used for course identification.

### 3. Keys For The Exam

The key cards for the exam are the same as the student answer cards. They are of three types: major keys, secondary keys, and weight cards.

#### A. MAJOR KEYS - Required

Contain the instructor's first choice of correct answers. It must contain an answer for each question to be graded. Questions not to be graded must be left blank. Columns 1-5 have a 99999.

#### B. SECONDARY KEYS - Optional

Contain alternate answers to those given on the major keys. If a question on a secondary key card is left blank, no alternate answer is assumed. There can be 4 or less secondary key cards for each major key. Columns 1-5 have a 99998 for first alternate key, 99997 for second, 99996 for third, and 99995 for the fourth alternate key.

#### C. WEIGHT KEYS - Optional

If used, the weight key will have a weight for each question answered on the major key. An answer A on the weight key assigns that question a weight of 1; a B, a weight of 2; a C, a weight of 3; a D, a weight of 4; an E, a weight of 5. If a question is left blank, the weight is assumed to be 1. Columns 1-5 contain 99994.

#### Column 30 of ALL the key cards contains:

- 1, if the card pertains to the first 50 questions
- 2, if the card pertains to the second 50 questions
- 3, if the card pertains to the third 50 questions  
and so on, until
- 9, if the card pertains to the ninth 50 questions
- 0, if the card pertains to the tenth 50 questions

Only one answer per question is allowed, but by using the alternate key cards, if the student answers any one of the correct answers he will get credit for that question. Let it be stressed that one and only one answer is to be marked per question.

If any of the alternate key cards or weight cards are not marked, they do not have to be read in, but if they are read in they are ignored.

The order by which the key cards are read in after the control card is of no consequence.

### 4. Student Answer Cards.

<u>Card Columns</u>	<u>Data</u>
1-5	Student number
6-23	Student name
24-25	Section number
26-29	Course number
30	Card number
31-80	Student's answers

The student's answer cards do not have to be in any particular order. The only requirement is that all cards for one student be read in together.

### OUTPUT

#### 1. Student's grade card

<u>Card Column</u>	<u>Data</u>
2-3	Section number
6-9	Course number
15-32	Student's name
39-43	Student number
49-51	Number of correct answers
57-59	Number of incorrect answers
65-67	Number of questions omitted
72-74	Score
76-80	Any data in columns 20-24 of the control card

2. Student's omitted question numbers card

<u>Card Columns</u>	<u>Data</u>
18-34	Comment "QUESTIONS OMITTED"
40-42	First question number omitted
44-46	Second question number omitted
.	.
.	.
76-78	Tenth question number omitted

If more than ten questions were omitted, they will be punched on the following card, etc.

3. Grade distribution cards.

<u>Card Columns</u>	<u>Data</u>
2-3	Section number
6-9	Course number
35-37	Score
48-50	Frequency
61-63	Cumulative frequency
74-76	Percentile

4. Exam Analysis Cards

<u>Card Columns</u>	<u>Data</u>
2-3	Section number
6-9	Course number
14-16	Question number
18	Weight of question
23-26	Number of A answers
32-35	Number of B answers
41-44	Number of C answers
50-53	Number of D answers
59-62	Number of E answers
68-71	Number of omissions
78-80	Percent of correct answers to this question

## SAMPLE INPUT DATA

01050003	1	ROSS	PSYCHOLOGY	201 SEC 01 + 02
99998ALTERNATE KEY	01	20119999979	77777	2222222
99997ALTERNATE KEY	01	201187888		
99994WEIGHT CARDEY	01	2011999998888877778888899999	33333	1111100000
99999MASTER KEY CARD	02	20117877888788887877877 778772233323 3	3232322323323232	
56223WILKINSON CAMILLE	01	20117878788888878777787722333233232322233232	01	201
57829BAILEY PHILLIP JAS	01	201178778888888787887777877323332322233323232333332	01	201
58377HABES JOHN D JR	01	2011787788888887878886223323332323233322	01	201
60243SINGLETON WILLIAM	01	2011777888778778878887777879223332323323332223	01	201
59089SHADDINGER MARYE	01	2011787788888887877777787823332332323222333232	01	201
54373EMBRY JANICE PHILL	01	20117877888788787787778223323323222323323232	01	201
56120TOWNSEND JOHN HERN	01	201178788 7787887887777878233323323232223323232	01	201
56201WELLS STEVE C	01	20117778888787887877778772233323223323332222	01	201
55541LAFOLETTE LOIS B	01	2011787788778877887878882233232321323222333332	01	201
54136CRAWFORD BUREN R	01	20117777887877887778777877323333332332322332222	01	201
58988RAY SUSAN GILBERT	01	201178 878877787787723333 333 332 32 3 33332	01	201
58285FRAZIER BRENDA MAR	01	20117778888788888878777877333323232332323323232	01	201
55344GRIMES F ANITA	01	20117878888788888878777877233323332	01	201
55147CURTIS MARY M	01	201178788878778778777877233323323233233232	01	201
54691PASH JOHN	01	201178788888877877887787723332332323322232	01	201
56136GUZZLE ROBERT H	01	201178778888888778788777788723332223223233233232	01	201
47551CHAMPION JOHN POWE	01	201177777878778777778777232322222222222222	01	201
59123SLACK CHERYL GAY	01	2011787888887887787788888332323323323323323323	01	201
52850FYFE CHARLES WATK	01	20117778888788788877878782233232323233333232	01	201
57780ALEXANDER STACY M	01	201178788888887877887777877323323232323333232	01	201
55497JONES SANDRA L	01	20117878888787878787778772233232322323233232	01	201
60082BARNES CLAIR CORTL	01	2011787 88878 887877887887323323222322332323232	01	201
59232TAYLOR DIANNA TEEN	01	2011777888878888878787777877232332322333322	01	201
55225EDWARDS HAROLD M	01	20117778787888787878 78777877232323232333322	01	201
55257FINCH JO CAROL	01	20117878888787887877888223333232333323233332	01	201
57767ABRAHAM GLADYS K	01	201177787887788878888778877877233232323333232	01	201
55659MAGEE ROBERT M	01	20117777888788887887787778772233323223323232	01	201
57140LITTON PEGGY SCOTT	01	201177788887788887877878233323332332332323232	01	201
54505WHITTEN MARY ANN	01	2011777888878888878878777887232332332232323232	01	201
47513CALVIN JOHN HENRY	01	2011787888878888787878878772333233223323323323	01	201
54650GUNN VIRGINIA C	01	201178788888778877887778872233232322323332323	01	201
54383REA WILLIAM L	02	201178788787888878778877877223323323222333233232	01	201
57047HARRIS CAROLYN ANN	02	201178778887888878788777787722332323232323232	01	201
55584LOGAN FREDERICK M	02	2011787888878888877877 87878232333 3 33323 23332 32	01	201
50037BEAVER SONDRA KATH	02	2011787788878878787778 778772223322 3 22223 23332232	01	201
55262FLAGG CAROLYN B	02	20117878788788887877877 778782233323 3 32323223233232	01	201
56116TIBBETTS ROBERT N	02	2011777888788878787877 778772223323 3 32232232333232	01	201
58867NECAISE JEANNE KAY	02	20117877888788887877877 778772223323 3 32323222333232	01	201
55064CARVER CANDACE ANN	02	20117777888787887877778 778782323323 2 32223222333232	01	201
55983SHARPE SUSAN MANN	02	2011777788878877877778 778782233323 2 223232232323232	01	201
53308BRICE LEO EDWARD	02	201178788878888787877 778772233323 3 33232323233232	01	201
56959DOUGHERTY PATRICIA	02	201178778888888788887 778782332323 2 333232223333232	01	201
55311GEORGE FRED ANTHON	02	201178778887888777877887 78887223323 3 332323223222232	01	201
57123LAUGHLIN JAMES RIC	02	20117877888788877877877 7787723332323 2 332232233323232	01	201
55128COX ALVIN C JR	02	2011788788778787887878 778872233323 2 332232323232323	01	201
53526WEBB THOMAS LYTL	02	20117778788878887877877 7787733332323 2 3233223333232	01	201
58576JUE TRUMAN	02	201178778877888777777 7787832223323 3 3233222333232	01	201
58248FELLOWS DONALD K	J02	20117877888787887877778772223323 3 32223223 322222	01	201
58265FOOSE JONATHAN EDW	02	2011787888878777787887777878233323232223323333322	01	201
50208CHURCH CLARENCE H	02	20117778888788878877877 878872233323 2 32223232323322	01	201

## SAMPLE OUTPUT DATA

PSYCHOLOGY	201	SEC	01 + 02	I. D.	NUMBER	NUMBER	NUMBER	NUMBER	SCORE	IDEN
SEC	COURSE	NAME		NUMBER	RIGHT	WRONG	OMITTED			
01	201	WILKINSON CAMILLE	56223	38	9			73	ROSS	
01	201	BAILEY PHILLIP JAS	57829	40	7			84	ROSS	
01	201	HABES JOHN D JR	58377	36	11			72	ROSS	
01	201	SINGLETION WILLIAM	60243	35	12			66	ROSS	
01	201	SHADDINGER MARYE J	59089	41	6			86	ROSS	
01	201	EMBRY JANICE PHILL	54373	41	6			88	ROSS	
01	201	TOWNSEND JOHN HERN	56120	33	8			65	ROSS	
		QUESTIONS OMITTED	6	16	29	38	43	46		
01	201	WELLS STEVE C	56201	38	9			75	ROSS	
01	201	LAFOLLETTE LOIS B	55541	37	10			77	ROSS	
01	201	CRAWFORD BUREN R	54136	39	8			83	ROSS	
01	201	RAY SUSAN GILBERT	58988	30	6			63	ROSS	
		QUESTIONS OMITTED	3	4	5	10	11	18	39	
		QUESTIONS OMITTED	45					42	44	
01	201	FRAZIER BRENDA MAR	58285	38	9			79	ROSS	
01	201	GRIMES F ANITA	55344	37	9			79	ROSS	
		QUESTIONS OMITTED	36							
01	201	CURTIS MARY M	55147	39	8			75	ROSS	
01	201	PASH JOHN	54691	37	10			74	ROSS	
01	201	UZZLE ROBERT H	56136	33	14			63	ROSS	
01	201	CHAMPION JOHN POWE	47551	35	12			73	ROSS	
01	201	SLACK CHERYL GAY	59123	30	17			65	ROSS	
01	201	FYFE CHARLES WATKI	52850	39	8			76	ROSS	
01	201	ALEXANDER STACY M	57780	42	5			88	ROSS	
01	201	JONES SANDRA L	55497	42	5			86	ROSS	
01	201	BARNES CLAIR CORTL	60082	39	6			88	ROSS	
		QUESTIONS OMITTED	4	10						
01	201	TAYLOR DIANNA TEEN	59232	42	5			83	ROSS	
01	201	EDWARDS HAROLD M J	55225	34	12			70	ROSS	
		QUESTIONS OMITTED	17							
01	201	FINCH JO CAROL	55257	36	11			74	ROSS	
01	201	ABRAHAM GLADYS K	57767	32	15			67	ROSS	
01	201	MAGEE ROBERT M	55659	37	10			75	ROSS	
01	201	LITTON PEGGY SCOTT	57140	40	7			88	ROSS	
01	201	WHITTEN MARY ANN	54505	39	8			85	ROSS	
01	201	CALVIN JOHN HENRY	47513	37	10			74	ROSS	
01	201	GUNN VIRGINIA C	54650	40	7			84	ROSS	

SEC	COURSE	SCORE	FREQUENCY	CUM. FREQ.	PERCENTILE	SEC	COURSE	QUESTION NUMBER	A	B	EXAM ANALYSIS	C	D	E	OMIT	PERCENT CORRECT
01	201	63	2	2	6	01	201	1	*	*	31*					100
01	201	65	2	4	13	01	201	2	*	19*	12*				100	
01	201	66	1	5	16	01	201	3	*	*	30*			1	97	
01	201	67	1	6	19	01	201	4	*	19*	10*			2	94	
01	201	70	1	7	23	01	201	5	*	23*	7			1	74	
01	201	72	1	8	26	01	201	6 B	*	30*	*			1	97	
01	201	73	2	10	32	01	201	7 B	*	23*	8				74	
01	201	74	3	13	42	01	201	8 B		13	18*				58	
01	201	75	3	16	52	01	201	9 B		27*	4				87	
01	201	76	1	17	55	01	201	10 B		20*	9			2	65	
01	201	77	1	18	58	01	201	11 C		21*	9*			1	97	
01	201	79	2	20	65	01	201	12 C		25*	6*				100	
01	201	83	2	22	71	01	201	13 C		6	25*				81	
01	201	84	2	24	77	01	201	14 C		30*	1*				100	
01	201	85	1	25	81	01	201	15 C		3	28*				90	
01	201	86	2	27	87	01	201	16 B		12	18*			1	90	
01	201	88	4	31	100	01	201	17 B		20*	10				58	

NUMBER OF TEST = 31 MEAN = 77 STANDARD DEVIATION = 7

01	201	19 B	7	24*	THIS QUESTION OMITTED AT THE REQUEST OF THE INSTRUCTOR												77
01	201	20															
01	201	21															84
01	201	22															90
01	201	23															90
01	201	24															71
01	201	25	1	9	22*												68
01	201	26															84
01	201	27															55
01	201	28															90
01	201	29															87
01	201	30															81
01	201	31 B															81
01	201	32 B															90
01	201	33															
01	201	34 B															68
01	201	35															
01	201	36															97
01	201	37															39
01	201	38															97
01	201	39															74
01	201	40															100
01	201	41 D															65
01	201	42 D															68
01	201	43 D															65
01	201	44 D															45
01	201	45 D															90
01	201	46 E															90
01	201	47 E															39
01	201	48 E															52
01	201	49 E															81
01	201	50 E															90

ASTERISK (\*) INDICATES CORRECT ANSWER

PSYCHOLOGY 201 SEC 01 + 02		I. D. NUMBER	NUMBER RIGHT	NUMBER WRONG	NUMBER OMITTED	SCORE IDEN	SEC COURSE	SCORE	FREQUENCY	CUM. FREQ.	PERCENTILE
SEC COURSE NAME							02 201	54	1	1	5
02 201	REA WILLIAM L	54383	42	5		82 ROSS	02 201	66	1	2	11
02 201	HARRIS CAROLYN ANN	57047	45	2		94 ROSS	02 201	69	1	3	16
02 201	LOGAN FREDERICK M	55584	37	8	2	78 ROSS	02 201	72	1	4	21
	QUESTIONS OMITTED	41 48					02 201	73	1	5	26
02 201	BEAVER SON德拉 KATH	50037	40	6	1	81 ROSS	02 201	76	2	7	37
	QUESTIONS OMITTED	41					02 201	78	1	8	42
02 201	FLAGG CAROLYN B	55262	44	3		93 ROSS	02 201	81	3	11	58
02 201	TIBBETTS ROBERT N	56116	38	9		76 ROSS	02 201	82	2	13	68
02 201	NECAISE JEANNE KAY	58867	44	3		88 ROSS	02 201	84	2	15	79
02 201	CARVER CANDACE ANN	55064	36	11		72 ROSS	02 201	86	1	16	84
02 201	SHARPE SUSAN MANN	55983	38	9		76 ROSS	02 201	88	1	17	89
02 201	RICE LEO EDWARD	53308	42	5		84 ROSS	02 201	93	1	18	95
02 201	DOUGHERTY PATRICIA	56959	33	14		66 ROSS	02 201	94	1	19	100
02 201	GEORGE FRED ANTHON	55311	39	8		82 ROSS					
02 201	LAUGHLIN JAMES RIC	57123	41	6		86 ROSS					
02 201	COX ALVIN C JR	55128	30	17		54 ROSS					
02 201	WEBB THOMAS LYTHE	53526	35	12		73 ROSS					
02 201	JUE TRUMAN	58576	35	12		81 ROSS					
02 201	FELLOWS DONALD K J	58248	42	4	1	84 ROSS					
	QUESTIONS OMITTED	44									
02 201	FOOSE JONATHAN EDW	58265	39	8		81 ROSS					
02 201	CHURCH CLARENCE H	50208	36	11		69 ROSS					

NUMBER OF TEST = 19 MEAN = 79 STANDARD DEVIATION = 9

SEC	COURSE	QUESTION NUMBER	EXAM ANALYSIS					PERCENT OMIT	TOTAL FOR ALL SECTIONS		SCORE	FREQUENCY	CUM. FREQ.	PERCENTILE
			A	B	C	D	E		COURSE	PERCENT CORRECT				
02	201	1	*	*	19*			100	201	54	1	1	2	
02	201	2	*	14*	5*			100	201	63	2	3	6	
02	201	3	*	1*	18*			100	201	65	2	5	10	
02	201	4	*	6*	13*			100	201	66	2	7	14	
02	201	5	*	14*	5			74	201	67	1	8	16	
02	201	6 B	*	18*	1*			100	201	69	1	9	18	
02	201	7 B	*	16*	3			84	201	70	1	10	20	
02	201	8 B		4	15*			79	201	72	2	12	24	
02	201	9 B		16*	3			84	201	73	3	15	30	
02	201	10 B		14*	5			74	201	74	3	18	36	
02	201	11 C		13*	6*			100	201	75	3	21	42	
02	201	12 C		14*	5*			100	201	76	3	24	48	
02	201	13 C		3	16*			84	201	77	1	25	50	
02	201	14 C		19*	*			100	201	78	1	26	52	
02	201	15 C		2	17*			89	201	79	2	28	56	
02	201	16 B		4	15*			79	201	81	3	31	62	
02	201	17 B		13*	6			68	201	82	2	33	66	
02	201	18 B		4	15*			79	201	83	2	35	70	
02	201	19 B		4	15*			79	201	84	4	39	78	
02	201	20 THIS QUESTION OMITTED AT THE REQUEST OF THE INSTRUCTOR							201	85	1	40	80	
02	201	21		3	16*			84	201	86	3	43	86	
02	201	22		1	18*			95	201	88	5	48	96	
02	201	23		18*	1			95	201	93	1	49	98	
02	201	24		3	16*			84	201	94	1	50	100	
02	201	25		8	11*			58						
02	201	26		2	17*			89						
02	201	27		6	13*			68						
02	201	28		15*	4			79						
02	201	29		17*	2			89						
02	201	30		18*	1			95						
02	201	31 B		6	13*			68						
02	201	32 B		17*	2			89						
02	201	33 THIS QUESTION OMITTED AT THE REQUEST OF THE INSTRUCTOR												
02	201	34 B		12*	7			63						
02	201	35 THIS QUESTION OMITTED AT THE REQUEST OF THE INSTRUCTOR												
02	201	36		17*	2*			100						
02	201	37		7	12*			63						
02	201	38		8*	11*			100						
02	201	39		4	15*			79						
02	201	40		19*	*			100						
02	201	41 D		3	14*		2	74						
02	201	42 D		3	16*			84						
02	201	43 D		14*	5			74						
02	201	44 D		10	8*		1	42						
02	201	45 D		18*	1			95						
02	201	46 E		17*	2			89						
02	201	47 E		10	9*			47						
02	201	48 E		2*	16		1	11						
02	201	49 E		17*	2			89						
02	201	50 E		1	18*			95						

ASTERISK (\*) INDICATES CORRECT ANSWER

NUMBER OF TEST = 50 MEAN = 78 STANDARD DEVIATION = 8

## TOTAL FOR ALL SECTIONS

COURSE NUMBER	QUESTION	EXAM ANALYSIS		E	OMIT	PERCENT CORRECT
		C	D			
201	1	*	*			100
201	2	*	33*			100
201	3	*	1*			98
201	4	*	25*			96
201	5	*	37*			74
201	6 B	*	48*			98
201	7 B	*	39*			78
201	8 B		17			66
201	9 B		43*			86
201	10 B		34*			68
201	11 C		34*			98
201	12 C		39*			100
201	13 C		9			82
201	14 C		49*			100
201	15 C		5			90
201	16 B		16			66
201	17 B		33*			66
201	18 B		7			84
201	19 B		11			78
201	20	THIS QUESTION OMITTED AT THE REQUEST OF THE INSTRUCTOR				
201	21		8			84
201	22		4			92
201	23		46*			92
201	24		12			76
201	25	1	17			64
201	26		7			86
201	27		20			60
201	28		43*			86
201	29		44*			88
201	30		43*			86
201	31 B		11			76
201	32 B		45*			90
201	33	THIS QUESTION OMITTED AT THE REQUEST OF THE INSTRUCTOR				
201	34 B		33*			66
201	35	THIS QUESTION OMITTED AT THE REQUEST OF THE INSTRUCTOR				
201	36		43*			98
201	37		25			48
201	38		21*			98
201	39		11			76
201	40		50*			100
201	41 D		14			68
201	42 D		12			74
201	43 D		34*			68
201	44 D		26			44
201	45 D		46*			92
201	46 E		45*			90
201	47 E		29			42
201	48 E		18*			36
201	49 E		42*			84
201	50 E		4			92

ASTERISK (\*) INDICATES CORRECT ANSWER

\* UNIV. OF MISS. TEST SCORING PROGRAM (UMTS) PAGE 01 Z 10010  
 \* VERSION - A Z 10020  
 \* BY RICHARD D ROSS Z 10030  
 \* FEBRUARY 28, 1966 Z 10040  
 \* DORG 400 10050  
 SIZE DS 500,,, MAXIMUM NUMBER OF QUESTIONS 10060  
 NCARD DS 10,,, MAXIMUM NUMBER OF CARDS 10070  
 HEADZ 10080  
 \* SET UP HEADER CARDS FOR OUTPUT 10090  
 DS 100 10100  
 DS 9 10110  
 DS 2 10120  
 DS 4 10130  
 X DAS 80 10140  
 DS 4 10150  
 ZERO DC 160,0 10160  
 DS 2 10170  
 NMM DAC 5,NAME- 10180  
 HA DAS 80 10190  
 DS 2 10200  
 HB DAS 80 10210  
 DS 2 10220  
 HC DAS 80 10230  
 DS 2 10240  
 HD DAS 80 10250  
 DS 2 10260  
 HE DAS 80 10270  
 DS 2 10280  
 DS 2 10290  
 DS 2 10300  
 HE DAS 80 10310  
 DS 2 10320  
 ROSS DAC 48,SCORE FREQUENCY CUM. FREQ. PERCENTILE- 10330  
 H4 DAC 9,QUESTION- 10340  
 H5 DAC 8,PERCENT- 10350  
 H6 DAC 56,A B C D E OMIT CORRECT- 10360  
 HDHD DAC 14,EXAM ANALYSIS- 10370  
 H1 DAC 32,I. D. NUMBER NUMBER NUMBER NUMBER- 10380  
 H2 DAC 40,NUMBER RIGHT WRONG OMITTED SCORE - 10390  
 H44 DAC 5,IDEN- 10400  
 H22 DAC 11,SEC COURSE- 10410  
 START TF HA+80\*2-2,ZERO 10420  
 TF HB+80\*2-2,ZERO 10430  
 TF HC+80\*2-2,ZERO 10440  
 TF HD+80\*2-2,ZERO 10450  
 TF HE+80\*2-2,ZERO 10460  
 TF HA+69\*2-2,H1+31\*2-2 10470  
 TF HB+10\*2-2,H22+10\*2-2 10480  
 TF HB+76\*2-2,H2+39\*2-2 10490  
 TF HB+80\*2-2,H44+4\*2-2 10500  
 TF HC+10\*2-2,H22+10\*2-2 10510  
 TF HC+80\*2-2,ROSS+47\*2-2 10520  
 TF HD+19\*2-2,H4+8\*2-2 10530  
 TF HD+80\*2-2,H5+7\*2-2 10540  
 TF HD+55\*2-2,HDHD+13\*2-2 10550  
 TF HE+18\*2-2,H2+6\*2-2 10560  
 TF HE+10\*2-2,H22+10\*2-2 10570  
 TF HE+80\*2-2,H6+55\*2-2 10580  
 TRA 10590  
 TCD START 10600

\* UNIV. OF MISS. TEST SCORING PROGRAM (UMTS) PAGE 02 Z 10610 \* UNIV. OF MISS. TEST SCORING PROGRAM (UMTS) PAGE 03 Z 11210  
 \* VERSION - A Z 10620 \* VERSION - A Z 11220  
 \* BY RICHARD D ROSS Z 10630 \* BY RICHARD D ROSS Z 11230  
 \* Z 10640 \*  
 \* BEGINNING OF PROGRAM TO GRADE TEST  
 \* DORG 400  
 HEAD  
 J DS 8  
 TBC DS \*J+2  
 DC 2,16,,  
 K DS 8  
 DC 2,12,,  
 L DS 8  
 DC 2,08,,  
 M DS 8  
 DC 2,04,,  
 N DS 8  
 DC 2,00,,  
 MM DS 8  
 DC 2,16,,  
 NN DS 8  
 DC 2,12,,  
 GRA DS 8,0,,  
 DC 2,08,,  
 GRB DS 8,0,,  
 DC 2,04,,  
 SDC DS 8,0,,  
 DC 2,00,,  
 RTZ DC 5,9  
 RT1 DC 2,5  
 RT2 DC 2,-01  
 DIVD DSC 2,00,,  
 \* TNF DS \*DIVD+1...  
 QQ DS 2  
 WW DS 2  
 \* X DAS 80  
 DC 2,0-  
 NINE DC 2,79  
 BLANK DS ,NINE+2  
 ZERO DC 160,0  
 DC 2,0-  
 Z7 DS ,ZERO-160+7  
 Z8 DS ,ZERO-160+8  
 Z10 DS ,ZERO-160+10  
 Z13 DS ,ZERO-160+13  
 Z18 DS ,ZERO-160+18  
 NMM DAC 5,NAME-  
 HA DAS 80  
 DC 2,0-  
 HB DAS 80  
 DC 2,0-  
 HC DAS 80  
 DC 2,0-  
 HD DAS 80  
 DC 2,0-  
 HE DAS 80

PAGE 02 Z 10650 H44 START READ READ RACD SF X+30\*2-3 CM BE READ,,, IF BLANK CARD IS READ,  
 Z 10660 DAC 5,IDEN- SF X+30\*2-3 SKIP THE CARD  
 Z 10670 SF X+30\*2-3  
 Z 10680 TF X+80\*2-2,ZERO  
 Z 10690 SF X+30\*2-3  
 Z 10700 CM X+5\*2-2,0,10  
 Z 10710 SF X+31\*2-3  
 Z 10720 BE READ,,,  
 Z 10730 CM X+30\*2-2,70,10  
 Z 10740 BNN ARNI  
 Z 10750 HEADER CARD  
 Z 10760 CF READ  
 Z 10770 CF RTTT  
 Z 10780 SF X+26\*2-3  
 Z 10790 TF WW,X+27\*2-2  
 Z 10800 SF X+31\*2-3  
 Z 10810 TF HA+30\*2-2,X+60\*2-2  
 Z 10820 TD CARD,X+2\*2-2  
 Z 10830 TD CARD-1,X+1\*2-2  
 Z 10840 SF CARD-1  
 Z 10850 TD QUES,X+5\*2-2  
 Z 10860 TD QUES-1,X+4\*2-2  
 Z 10870 TD QUES-2,X+3\*2-2  
 Z 10880 SF QUES-2  
 Z 10890 MM CARD,50,10  
 Z 10900 BZ ZRZ-12  
 Z 10910 SM 99,50,10  
 Z 10920 C 99,QUES  
 Z 10930 BNN ZRZ-12,,, NUMBER OF CARDS AND QUESTIONS  
 Z 10940 DO NO AGREE  
 Z 10950 MM CARD,50,10  
 Z 10960 C 99,QUES  
 Z 10970 BN ZRZ-12  
 Z 10980 TD BL,X+8\*2-2  
 Z 10990 TD BL-1,X+7\*2-2  
 Z 11000 TD BL-2,X+6\*2-2  
 Z 11010 SF BL-2  
 Z 11020 SF X+9\*2-3  
 Z 11030 TF XTOT+4,X+17\*2-2  
 Z 11040 SF XCOUR-1  
 Z 11050 SF XTOT-1  
 Z 11060 BD \*+36,XCOUR  
 Z 11070 TFM XCOUR,71,10  
 Z 11080 B \*+24  
 Z 11090 TFM XCOUR,0,10  
 Z 11100 BD \*+36,XTOT  
 Z 11110 TFM XTOT,71,10  
 Z 11120 B \*+24  
 Z 11130 TFM XTOT,0,10  
 Z 11140 TF XSAVE,XSEC  
 Z 11150 TD XNAME,X+18\*2-2  
 Z 11160 TF HB+18\*2-2,Z10  
 Z 11170 BD \*+24,XNAME  
 Z 11180 TF HB+18\*2-2,NMM+4\*2-2

* UNIV. OF MISS. TEST SCORING PROGRAM (UMTS)	PAGE 04	Z 11810	*	UNIV. OF MISS. TEST SCORING PROGRAM (UMTS)	PAGE 05	Z 12410
* VERSION - A		Z 11820	*	VERSION - A		Z 12420
* BY RICHARD D ROSS		Z 11830	*	BY RICHARD D ROSS		Z 12430
*		Z 11840	*			Z 12440
SF X+20*2-3		11850	AM ADR,1,10			12450
TF HG2,X+24*2-2		11860	S ADN,97			12460
TF HB+80*2-2,H44+4*2-2		11870	ZRF TFM ADR,50,610			12470
CM HG2,0,10		11880	AM ADN,2001,8			12480
BNE *+24		11890	BD ZRF,ADN-2			12490
TF HB+80*2-2,Z10-2		11900	SM ADR,1,10			12500
CM CARD,NCARD,10		11910	ZRG TF ADR,99,6			12510
BP ZRZ-12		11920	* ZERO BLANK COLUMN COUNT			12520
CM QUES,SIZE,9		11930	TFM BLC,0,9			12530
BNP ZRZ		11940	* INITILIZE WEIGHT CONSTANT			12540
BTM ERRF,ERR5		11950	S ADN,ADN			12550
ZRZ BTM ZRO,,,	ZERO TAB1, TAB2, FREQ, AND FREQT	11960	AM ADR,WT+1			12560
TR TAB2-3,TAB1-3		11970	S ADN,QUES			12570
TR FREQT-3,FREQ-3		11980	ZRP TDM ADR,1,6			12580
* ZERO ANSWER TABLE		11990	AM ADN,1001,8			12590
S ADN,ADN		12000	BD ZRP,ADN-2			12600
AM ADR,ANS-9+1		12010	B READ			12610
S ADN,QUES		12020	* CONATANTS USED			12620
ZRB TR ADR,ANSZ-1,6		12030	TAB1 DSB 4,5*SIZE,,,			12630
AM ADN,10001		12040	DS 1			12640
BD ZRB,ADN-2		12050	TAB2 DSB 4,5*SIZE,,,			12650
* SET UP CHECK CONSTANTS		12060	DS 1			12660
TF CKA,Z10		12070	TABZ DC 4,0,,,			12670
TF CKB,Z10		12080	DC 4,0			12680
TFM J,,10		12090	DC 4,0			12690
ZRD TD ZRE+6,J		12100	DC 4,0			12700
ZRE TDM CKA,1		12110	DC 4,0			12710
AM J,,1,10		12120	RM DC 1,--			12720
C J,CARD		12130	Y DAS 80			12730
BNP ZRD		12140	DC 2,0-			12740
SF CKA-9		12150	CARD DC 2,0,,,			12750
* ZERO CARD/QUESTION CONSTANT AND INITILIZE		12160	QUES DC 3,0,,,			12760
TR CQN+6*2-2-1,ANSZ		12170	BL DC 3,0,,,			12770
TR CQN-1,ANSZ-1		12180	BLC DC 3,0,,,			12780
TFM 97,0,9		12190	*			12790
TF J,QUES		12200	*			12800
APNX SM J,50,10		12210	MORG 10			12810
BNP HP36		12220	ANS DSB 10,SIZE,,,			12820
AM 97,1,10		12230	*			12830
B APNX		12240	*			12840
HP36 AM J,50,10		12250	DS 1			12850
SF J-1		12260	ADN DC 8,0			12860
TF 99,J		12270	ADR DS ,ADN-3			12870
CM CARD,10,10		12280	ANSZ DC 2,0,,,			12880
BNE ARN4		12290	DC 2,0			12890
CM 97,10,10		12300	DC 2,0			12900
BNE ARN3		12310	DC 2,0			12910
TFM CQN+50,10		12320	DC 2,0			12920
SM 97,1,10		12330	DC 1,-			12930
B ARN4		12340	FREQ DSB 4,101,,,			12940
DORG *-4		12350	DS 17			12950
ARN3 TF CQN,99		12360	FREQT DSB 4,101,,,			12960
ARN4 S ADN,ADN		12370	DS 17			12970
AM ADR,CQN+2		12380	*			12980
CM 97,0,10		12390	*			12990
BE ZRG		12400	*			13000

* UNIV. OF MISS. TEST SCORING PROGRAM (UMTS)		PAGE 06	Z 13010	* UNIV. OF MISS. TEST SCORING PROGRAM (UMTS)	PAGE 07	Z 13610
* VERSION - A			Z 13020	* VERSION - A		Z 13620
* BY RICHARD D ROSS			Z 13030	* BY RICHARD D ROSS		Z 13630
* ARN1 BNF ARN11,READ			Z 13040	*		Z 13640
BTM ERRF,ERR4			13050	DORG *-4		13650
ARN11 C X+4*2-2,CONA-2			13060	SM RR-3-5,1,10		13660
BNE STUD,,,		BRANCH TO READ STUDENTS CARDS	13070	BD ZRR,RR-3-5,11		13670
CF WET,,,		USED TO CHECK FOR WEIGHT CARD	13080	BNF ZRRX,ZRJ,,,	THIS IS NOT A MASTER KEY CARD	13680
C X+5*2-2,CONB			13090	AM BLC,1,10,,,	THIS IS A MASTER KEY CARD	13690
BNE WET,,,		NO WEIGHT CARD	13100	TFM J,10,10		13700
SF WET,,,		THERE IS A WEIGHT CARD	13110	TDM RR-3,0		13710
* SET UP ANSWER CARDS AND WEIGHT CARDS			13120	TD RR-3,RRM,6		13720
* WET CF ZRJ,,,		USED TO CHECK FOR MASTER KEY CARD	13130	AM RR-3,1,10		13730
C X+5*2-2,CONA			13140	SM J,1,10		13740
BNE ARN6		THIS IS A MASTER KEY CARD	13150	BNZ ZSS		13750
SF ZRJ,,,			13160	SM RR-3,1,10		13760
TD ZRJ+6*X+30*2-2			13170	TDM RR-3-5-5,0,6		13770
ZRJ TDM CKB,1			13180	TD *+18*X+30*2-2		13780
ARN6 TD CN,X+30*2-2,,,		GET CARD NUMBER	13190	TDM CKB,1,,,	USED TO CHECK FOR ALL MASTER KEY CA	13790
MM CN,2,9			13200	B ZRRX		13800
AM 99,CQN			13210	DORG *-4		13810
TF CT,99,11,,		GET QUESTIONS TO BE GRADED FOR THIS	13220	BNR *+24,RR-3,11		13820
MM CN,50,10			13230	B *+24		13830
SM 99,49,10			13240	TD RR-3,RR-3-5-5,611,,	PUT CORRECT WEIGHT IN TABLE	13840
BNN *+24			13250	ZRRX A RR,RRCP		13850
AM 99,500,9,,,		THIS IS A NUMBER 10-CARD	13260	BD STT,RR-2		13860
SF 97			13270	BD ZRR,RR-2		13870
TF QC,99,,,		GET QUESTION NUMBER FOR THIS CARD	13280	B READ		13880
TF RR,Z18			13290	DORG *-4		13890
TFM RR-3-5-5,WT-1			13300	*	CONSTANTS USED FOR THIS PORTION OF THE PROGRAM	13900
A RR-3-5-5,QC			13310	CONA DC 10,7979797979		13910
AM RR-3-5,X+31*2-2			13320	CONB DC 10,7979797974		13920
AM RR-3,ANS-10+1			13330	MORG 10		13930
A RR-4,QC			13340	CKA DC 10,0,,,	CHECK CONSTANT TO SEE IF ALL CARDS	13940
S RR,CT			13350	WTT DSC 10,5432154321,,,	WEIGHT GIVEN FOR ANY PUNCH ON CARD	13950
STT TD RR-3,RR-3-5,11			13360	*	BEEN READ IN FOR ONE SET OF CARDS	13960
* PUT WEIGHT VALUE INTO CORRECT TABLES			13370	SAME AS CKA	13970	
BNF ARN7*WET,,,		THIS IS NOT A WEIGHT CARD	13380	NUMBER OF QUESTIONS PER EACH CARD	13980	
TD BNF+11,RR-3-5,11			13390		13990	
SM RR-3-5,1,10,,		THIS IS A WEIGHT CARD	13400	DS 3	CARD NUMBER	14000
BNR *+24,RR-3,11			13410	CT DC 2,0,,,	TOTAL QUESTIONS TO GRADE PER CARD	14010
B ZRRX			13420	QC DC 3,0,,,	QUESTION NUMBER FOR ANY CARD	14020
BD BNF,RR-3-5,11			13430	DC 1,-	14030	
B ZRRX			13440	RR DC 28,0	14040	
DORG *-4			13450	DS 5	14050	
BNF TD RR-3-5-5,WTT,6			13460	RRCP DC 14,10000300010001	14060	
TFM J,10,10			13470	RRC DC 18,20002000020001001	14070	
TDM RR-3,0			13480	RTR DC 5,0	14080	
BNFF BNF BFF,RR-3,11			13490	WT DSB 1,SIZE,,,	WEIGHT TO BE GIVEN TO EACH QUESTION	14090
B BFF+12			13500	*	14100	
DORG *-4			13510	DETERMINE MAXIMUM SCORE (MAXS)	14110	
BFF TD RR-3,RR-3-5-5,611			13520	STUD SF CKB-9	14120	
AM RR-3,1,10			13530	C CKA,CKB	14130	
SM J,1,10			13540	BE BN2		
BNZ BNFF			13550	BTM ERRF,ERR2,,,	MISSING MASTER DEY CARDS, START OVE	14140
SM RR-3,1,10			13560	C BL,BLC	14150	
B ZRRX			13570	BE BN3	14160	
			13580	BTM ERRF,ERR3,,,	COUNT OF BLANK QUES. INCORRECT	14170
			13590	TFM MAXS,0,8	14180	
			13600	BNLC *+12	14190	
				TF ADN,27	14200	

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ZRN TFM ADR,WT+1  
 ZRN S ADN,QUES  
 ZRM TD ZRM+11,ADR,11  
 ZRM AM MAXS,0,10  
 ZRM AM ADN,1001+8

BD ZRN,ADN-2  
 SF X+24\*2-3  
 SF X+26\*2-3  
 TF SEC,X+25\*2-2  
 TF COUR,X+29\*2-2  
 TF CIDC,X+5\*2-2  
 TF COURR,COUR  
 TFM TESTB,0,8  
 TF GR8,Z8  
 CF BN6  
 WACD HA  
 WACD HB  
 WACD BLANK

BN6 TFM TESTA,0,8  
 TF GRA,Z8  
 BNF BN66,BN6

WACD HA  
 WACD HB  
 WACD BLANK

BN66 SF BN6  
 \* ZERO TOTALS FOR EACH STUDENT  
 BA TFM RIGHT,Z7  
 TFM WRONG,0,9  
 TFM OMIT,0,9  
 TF CKB,Z10  
 TFM NOMZ+6,NOMIT  
 TF K,CARD  
 TF SECC,X+25\*2-2  
 TF COURC,X+29\*2-2  
 TF CIDC,X+5\*2-2  
 C SEC,SECC  
 BE HP24  
 BD HP24,XSEC  
 B PSEC  
 DORG #-4

HP24 C COUR,COURC  
 BE RAD

BD RAD,XCOUR

B PSEC

DORG #-4

RAD B RAD24

RED BLC ERRA,,,

RADC X,,,

CF X+6\*2-3

CM X+23\*2-2,0,10

BE RED,,,

RAD24 SF X+30\*2-3

CM X+30\*2-2,70,10

BN PSEC

TF CID,X+5\*2-2

C CID,CIDC

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\* BE BN1  
 ERRA TF ERR1+13\*2-2,CIDC,,, STUDENT HAS MISSING CARDS

RCTY  
 WATY ERR1  
 ERRAA BNLC \*+12  
 TFM JA,0,10  
 TFM HCA+11,CKB-9

HCA BD HCT,CKB-9  
 HCAA AM HCA+11,1,10  
 AM JA,1,10  
 CM JA,10,10  
 BNE HCA

H B H488  
 DORG #-4  
 HCT BTM SETUP,JA  
 MM CN,100,9  
 AM 99,HOLD-1-100+NCARD/10\*100

TF RR-3-5-5,99  
 SM 99,X+31\*2-2-1  
 A RR-3-5,99

LOOPA TD RR-3,RR-3-5,11  
 BD CHECKA,RR-3-5-5-5,11  
 B THRUUA  
 DORG #-4

CHECKABNR \*\*+24,RR-3,11  
 B THRUUA  
 THRU TD THRA+10,RR-3

THRA A RR-3-5-5,TBC  
 SM RR-3-5-5,1,610  
 S RR-3-5-5,THRA+11,11

THRUUA RR-1,RRC  
 BD LOOPA,RR-2  
 B HCAA  
 DORG #-4

HOLD DAS 50\*NCARD,,, HOLD AREA FOR CARDS  
 JA DS 5  
 \* SUBROUTINE TO SET UP CONSTANTS

DS 5  
 SETUP TD CN,SETUP-1,11,, GET CARD NUMBER  
 MM CN,2,9

AM 99,CQN  
 TF CT,99,11,, GET QUESTIONS TO BE GRADED FOR THIS  
 MM CN,50,10

SM 99,49,10  
 BNN \*\*+24  
 AM 99,500,9  
 SF 97

TF QC,99,,, GET QUESTION NUMBER FOR THIS CARD  
 TF RR,Z18+5  
 AM RR-3,ANS-10+1

A RR-4,QC  
 S RR-1,CT  
 AM RR-3-5-5-5,X+31\*2-3

AM RR-3-5-X+31\*2-2  
 AM RR-3-5-5,TAB1

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STUDENT HAS MISSING CARDS  
 READ STUDENTS CARDS  
 IF NAME AND I D NO. ARE BLANK SKIP

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CM SETUP-1,JA  
 BE \*\*+24  
 SF RR-3-5-5-5-2  
 MM QC,20,10  
 SM 99,20,10  
 A RR-3-5-5,99  
 BB  
 DORG #-9

\* END OF SETUP ROUTINE

BN1 SF X+31\*2-3

\* CHECK TO SEE IF CARD NO. IS INCORRECT

TD \*\*+23,X+30\*2-2

BD HP20,CKA

RCTY

WATY ERR7

B ERRAA

DORG #-4

ERR7 DAC 19,CARD NO. INCORRECT-

HP20 BTM SETUP,X+30\*2-2,,, BRANCH TO SETUP ROUTINE

MM CN,100,9

AM 99,HOLD-2+NCARD/10\*100

TF 99,X+80\*2-2,6

TD \*\*+23,X+30\*2-2

BD NOCK,CKB,,

BRANCH TO NO-CHECK IF CARD HAS  
ALREADY BEEN GRADED

TD \*\*+18,X+30\*2-2

TDM CKB,1

\* GRADE STUDENTS CARD

TFM RTR,0

\* LOOP TO GRADE A STUDENTS CARD

LOOP TD RR-3,RR-3-5,11

BD CHECK,RR-3-5-5-5,11

\* QUESTION WAS OMITTED BY STUDENT

BNR \*\*+24,RR-3,11

B THRUU

TF 99,RR-3

SF 95

SM 99,ANS-20+1

SF 96

NOMZ TF NOMIT,98

AM NOMZ+6,3,10

AM OMIT,1,10

B THRUU

CHECK BNF RIGHTT,RR-3,11,,

BRANCH IF STUDENT ANSWERED QUESTION

CORRECTLY

BRANCH IF QUESTION WAS WRONG

QUESTION WAS OMITTED ON MASTER KEY

BNR THRU,RR-3,11,,,

B THRUU,,,

RIGHTTTD \*\*+23,RR-3,11

AM RTR+1000,8

THRU TD THR+10,RR-3

THR A RR-3-5-5,TBC

AM RR-3-5-5,1,610

S RR-3-5-5,THR+11,11

THRUU A RR-1,RRC

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 \* VERSION - A  
 \* BY RICHARD D ROSS

NOCK BD LOOP,RR-2  
 SF RTR-2  
 A RIGHT,RTR  
 A RIGHT-4,RTR-3  
 SM K,1,10  
 BNZ RED

\* END OF LOOP TO GRADE A STUDENTS CARD  
 \*

SF CKB-9  
 C CKB,CKA  
 BNE ERRA,,,  
 AM TESTA,1,10,,,  
 A WRONG,QUES  
 S WRONG,BL  
 S WRONG,RIGHT-4  
 S WRONG,OMIT  
 SF RIGHT-3  
 BTM DIV,\*+12+2  
 LD 99-3,RIGHT,27  
 D 100-4-3,MAXS,27  
 AM 95,5,10  
 SF 92

MISSING STUDENT CARDS  
KEEP TOTAL OF TEST GRADED

TF SC,94,,,  
 MM SC,4,10  
 AM 99,FREQ  
 AM 99,1,610  
 AM 99,FREQT-FREQ  
 AM 99,1,610  
 A GRA,SC,,,  
 TFM DECL,3,10

PICK UP SCORE

BTM DECS,SC,,,  
 TF Y+80\*2-2-ZERO  
 TF Y+74\*2-2,DECA  
 BTM DECS,RIGHT-4  
 TF Y+51\*2-2-DECA,,,  
 BTM DECS,WRONG

SUM THE SCORES

TF Y+59\*2-2-DECA,,,  
 BTM DECS,OMIT  
 TF Y+67\*2-2-DECA,,,  
 TF Y+43\*2-2-CIDC,,,  
 BD \*\*+24,XNAME

OUTPUT SCORE

SF X+6#2-3  
 TF Y+32\*2-2,NAME,,,  
 TF Y+3\*2-2,SECC  
 TF Y+9#2-2,COURC  
 TF Y+80\*2-2,HG2  
 WACD Y

OUTPUT NUMBER RIGHT

TF Y+59\*2-2-DECA,,,  
 BTM DECS,OMIT

OUTPUT NUMBER WRONG

TF Y+67\*2-2-DECA,,,  
 TF Y+43\*2-2-CIDC,,,  
 BD \*\*+24,XNAME

OUTPUT NUMBER OMITTED

SF X+6#2-3  
 TF Y+32\*2-2,NAME,,,  
 TF Y+3\*2-2,SECC

OUTPUT I. D. NUMBER

TF Y+9#2-2,COURC  
 TF Y+80\*2-2,HG2  
 WACD Y

OUTPUT NAME

H588 BD H488,QQ,,,  
 \*

IF DIGIT IN -QQ- OMIT OMITTED  
QUESTION OUTPUT

TF Y+80\*2-2,ZERO  
 TF Y+34\*2-2,ERR6+17\*2-2  
 TFM H322+11,NOMIT

16530

TF Y+80\*2-2,ZERO-34\*2  
 TFM H522+6,Y+42\*2-2

16540

C H322+11,NOMZ+6

16550

TFM H322+11,NOMIT

16560

TF Y+80\*2-2,ZERO-34\*2  
 TFM H522+6,Y+42\*2-2

16570

C H322+11,NOMZ+6

16580

TFM H522+6,Y+42\*2-2

16590

C H322+11,NOMZ+6

16600

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* VERSION - A		Z 16620	*	VERSION - A		Z 17220
* BY RICHARD D ROSS		Z 16630	*	BY RICHARD D ROSS		Z 17230
*		Z 16640	*			Z 17240
BE H488		16650	TF SDC,Z8			17250
H322 BTM DECS,NOMIT		16660	TFM L,0,8			17260
AM H322+11,3,10		16670	TFM J,0,8			17270
H522 TF Y+42*2-2,DECA		16680	TFM PSB+11,FREQ			17280
AM H522+6,4*2		16690	TF Y+80*2-2,ZERO			17290
C H322+11,NOMZ+6		16700	CM PSB+11,0,610			17300
BE H722		16710	BE POUT			17310
CM H522+6,Y+82*2-2		16720	BNF *+24,RTTT			17320
BNE H322		16730	B *+24			17330
H722 WACD Y		16740	TF Y+3*2-2,SEC			17340
B H822		16750	TF Y+9*2-2,COUR			17350
H488 CF LCARD		16760	BTM DECS,J			17360
BLC PSECS		16770	CM J,0,10			17370
RACD X		16780	BNE *+24			17380
CF X+6*2-3		16790	TFM DECA,56,10			17390
CM X+23*2-2,0,10		16800	TF Y+37*2-2,DECA,,,	OUTPUT SCORE		17400
BE H488,,,		16810	BTM DECS,FREQ			17410
B BA		16820	TF Y+50*2-2,DECA,,,	OUTPUT FREQUENCY		17420
DORG *-4		16830	A L,PSB+11,11,,	SUM OF FREQUENCIES		17430
PSECS SF LCARD		16840	BTM DECS,L			17440
BD PSEA,XSEC		16850	TF Y+63*2-2,DECA,,,	OUTPUT CUMULATIVE FREQUENCY		17450
BD PSEA,XCOUR		16860	BTM DIV,*+12+2			17460
B PSEC		16870	LD 99-3,L,27			17470
DORG *-4		16880	D 100-3-4,TESTA,27			17480
PSEA BD *+24,XCOUR		16890	AM 95,5,10			17490
B PSEC		16900	SF 91			17500
TF XCOUR+4,XTOT+4		16910	BTM DECS,94,,,	OUTPUT PERCENTILE		17510
* TAB2=TAB2 + TAB1		16920	TF Y+76*2-2,DECA,,,	OUTPUT PERCENTILE		17520
PSEC TF XSECB,XSAVE		16930	TF K,J			17530
SF PSEC		16940	S K,MEAN,,	X - M		17540
A GRB,GRA		16950	M K,K,,	(X - M)**2		17550
A TESTB,TESTA		16960	TF A8,99			17560
TF RR+1,Z13+1		16970	M A8,PSB+11,11,,,	(X - M)**2*FREQ		17570
AM RR-3-5,TAB1		16980	SF 99-7			17580
AM RR-3,TAB2+1		16990	A SDC,99,,	SDC = SDC+(X-M)**2		17590
MM QUES,5,10		17000	WACD Y			17600
SF 96		17010	AM PSB+11,4,10			17610
S RR+1,99		17020	AM J,1,10			17620
PSX A RR-3,RR-3-5,611		17030	CM J,100,9			17630
A RR+1,A14		17040	BNP PSA			17640
BD PSX,RR-2		17050	TF Y+80*2-2,ZERO			17650
WACD NINE		17060	WACD BLANK			17660
BD ROUTT,XSEC		17070	BTM DECS,TESTA			17670
PSSS BD PCOUR,XSECA		17080	TF Y+29*2-2,NUMT+16*2-2			17680
TF HC+10*2-2,H22+10*2-2		17090	TF Y+34*2-2,DECA,,,	OUTPUT NUMBER OF TEST		17690
BNP *+24,RTTT		17100	TF Y+45*2-2,MEN+6*2-2			17700
TF HC+3*2-2,Z10-4		17110	BTM DECS,MEAN			17710
WACD HC		17120	TF Y+50*2-2,DECA,,,	OUTPUT MEAN		17720
WACD BLANK		17130	TF Y+75*2-2,ATDE+20*2-2			17730
TFM DECL,4,10		17140	BTM DIV,*+12+2			17740
BTM DIV,*+12+2		17150	LD 99-1,SDC,27			17750
LD 99-3,GRA,27		17160	D 100-1-8,TESTA,27			17760
D 100-3-8,TESTA,27		17170	AM 95,5,10			17770
AM 93,5,10		17180	TF SDC,94			17780
SF 89		17190	BT SQRSUB+SDC			17790
TF MEAN,92		17200	SF SDC-3			17800

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 \* VERSION - A Z 17810 \* VERSION - A Z 18420  
 \* BY RICHARD D ROSS Z 17820 \* BY RICHARD D ROSS Z 18430  
 \* CM SDC,0,10 Z 17830 \* Z 17840  
 BTM DECS,SDC  
 BNE \*\*+24  
 TFM DECA,56,10  
 TF Y+80\*2-2,DECA  
 WACD Y  
 WACD NINE  
 \* OUTPUT QUESTION ANALYSES  
 \*  
 PCOUR BD ROSP,XSECB  
 TF HE+10\*2-2,H22+10\*2-2  
 BNF \*\*+24,RTT  
 TF HE+3\*2-2,Z7-1  
 BNF \*\*+48,RTT  
 TF Y+80\*2-2,ZERO  
 TF Y+22\*2-2,TAS+22\*2-2  
 WACD Y  
 WACD HD  
 WACD HE  
 WACD BLANK  
 TFM APCC+11,ANS  
 TFM RCNN+11,WT  
 TF TCNT,RTZ  
 TFM J-5,0,10  
 TFM N,1,8  
 TFM APA+11,TAB1  
 TTN TF NN,Z8  
 TF M,Z8  
 TF K,Z8  
 APCC TFM APC+11,ANS  
 TF Y+80\*2-2,ZERO  
 AM J-5,1,10  
 CM J-5,26,10  
 BNE \*\*+36  
 A TCNT,RT1  
 TFM J-5,1,10  
 TD APC+11,TCNT  
 TFM J,5,10  
 BNF \*\*+24,RTT  
 B \*\*+24  
 TF Y+3\*2-2,SEC  
 TF Y+9\*2-2,COUR  
 BTM DECS,N  
 TF Y+16\*2-2,DECA  
 RCNN TD RCONX,WT  
 MM RCONX,2,9  
 AM 99,RCON  
 BD \*\*+24,WW,,, IF DIGIT IN -WW- OMIT WEIGHT FACTOR 18320  
 TF Y+18\*2-2,99,11  
 AM RCNN+11,1,10  
 TFM APB+6,Y+26\*2-2  
 BNR APA,APC+11,11  
 TF Y+20\*2-2+53\*2-2,NG+54\*2-2  
 AM APA+11,20,10  
 TFM Y+18\*2-2,0,10,,, IF QUESTION IS BLANK, NO WEIGHT FAC 18390  
 B TOUT,,, -35- THIS QUESTION OMITTED BY INSTRUCTOR 18400

Z 17850 \* DORG #-4  
 17860 APA BTM DECS,TAB1  
 17870 APB TF Y+20\*2-2,DECA  
 17880 A K,APA+11,11  
 17890 APC BNF APD,ANS  
 17900 A M,APA+11,11  
 17910 B APDD  
 17920 DORG #-4  
 17930 APD A NN,APA+11,11  
 17940 AM APB+6,2,10  
 17950 TFM APB+6,14,610  
 17960 SM APB+6,2,10  
 17970 APDD AM APA+11,4,10  
 17980 AM APB+6,9\*2  
 17990 A APC+11,RT2  
 18000 SM J,1,10  
 18010 BNZ APA  
 18020 TF MM,Z8  
 18030 A MM,TESTA  
 18040 S MM,M  
 18050 S MM,NN  
 18060 SF MM-3  
 18070 BTM DECS,MM  
 18080 TF APB+6,DECA,6,, OUTPUT OMITTED  
 18090 BTM DIV,\*+12+2  
 18100 LD 99-3,NN,27  
 18110 D 100-3-8,TESTA,27  
 18120 AM 95,5,10  
 18130 SF 91  
 18140 BTM DECS,94  
 18150 AM APB+6,9\*2  
 18160 TF APB+6,DECA,6  
 18170 TOUT WACD Y  
 18180 AM APCC+11,10,10  
 18190 AM N,1,10  
 18200 C N,QUES  
 18210 BNP TTN  
 18220 TF Y+80\*2-2,ZERO  
 18230 TF Y+49\*2-2,AST+39\*2-2  
 18240 WACD Y  
 18250 WACD NINE  
 18260 ROSP CF RTTT  
 18270 CF ROUT  
 18280 ROUTT BNF ROUT,LCARD  
 18290 B RTTT  
 18300 DORG #-4  
 18310 ROUT C COUR,COURC  
 18320 BE RPUN  
 18330 RTTT BD RPUN,XCOUR  
 18340 BNF RPUN,PSEC  
 18350 CF PSEC  
 18360 TF COUR,COURC  
 18370 SF ROUT  
 18380 SF RTTT  
 18390 TF XSECB,XCOUR+4  
 18400 TF TESTA,TESTB

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TF GRA,GRB  
 TR TAB1-3,TAB2-3  
 TR FREQ-3,FREQT-3  
 TF Y+80\*2-2,ZERO  
 TF Y+22\*2-2,TAS+22\*2-2  
 BD PCOUR,XSECA  
 WACD Y  
 B PSSS,,,  
 DORG \*-4

RPUN TF SEC,SECC  
 BTM ZRO  
 C COUR,COURC  
 BE LCARD

TF COUR,COURC  
 TF COURR,COUR  
 TFM TESTB,0,8

TF GRB,ZB  
 TR TAB2-3,TAB1-3  
 TR FREQT-3,FREQ-3

LCARD BNF H24+LCARD

B START  
 DORG \*-4

H24 CM X+30\*2-2,70,10

BN STAT  
 B BN6

DORG \*-4

XSAVE DS 6

XSEC DS 2

XSECA DS 2

XSECB DS 2

XCOUR DS 2

DS 2

DS 2

XTOT DS 2

DS 2

DS 2

DS 5

ERRF RCTY,,, SOME ERROR IN CONTROL CARD

WATY ERRF-1,,6

H

B START

DORG \*-4

\* CONSTANTS USED IN THIS PORTION OF THE PROGRAM

AST DAC 40,ASTERISK (\*) INDICATES CORRECT ANSWER-

NUMT DAC 17,NUMBER OF TEST ==

MEN DAC 7,MEAN ==

ATDE DAC 21,STANDARD DEVIATION ==

NG DAC 55,THIS QUESTION OMITTED AT THE REQUEST OF THE INSTRUCTOR-

ERR1 DAC 32,STUDENT XXXXX HAS MISSING CARDS-

ERR2 DAC 37,MISSING MASTER KEY CARDS, START OVER-

ERR3 DAC 47,COUNT OF BLANK QUESTIONS INCORRECT, START OVER-

ERR4 DAC 28,NO CONTROL CARD, START OVER-

ERR5 DAC 55,NO. OF CARDS OR NO. OF QUESTIONS INCORRECT, START OVER-

TAS DAC 23,TOTAL FOR ALL SECTIONS-

H22 DAC 11,SEC COURSE-

TESTA DC 4,0,,,

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 Z 19040

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 19590  
 19600

\* UNIV. OF MISS. TEST SCORING PROGRAM (UMTS)  
 \* VERSION - A  
 \* BY RICHARD D ROSS

\*

TESTB DC 4,0,,,  
 SC DC 3,0,,,  
 MEAN DC 4,0,,,  
 A8 DC 8,0  
 MAXS DS 5,,,  
 RIGHT DS 7,,,  
 WRONG DS 3,,,  
 OMIT DS 3,,,  
 DC 1,-

RRCC DC 15,200000300010001  
 CID DC 10,0  
 CIDC DC 10,0  
 NAME DS 9+23\*2-2  
 SEC DC 4,0  
 SECC DC 4,0  
 COUR DC 8,0  
 COURC DC 8,0  
 COURR DC 8,0  
 A14 DC 10,4000040001  
 XNAME DS 1  
 HG2 DS 10  
 25X DC 2,25  
 TCNT DS 5  
 DS 5

DECS BD DECSR,TNF  
 TNF DECA,DECS-1,11

B DECSR

DECSDR TF DECA,CONA  
 TF DECAX,DECL

TFM RDEC+6,DECA

RDEC TD DECA,DECS-1,11

SM DECS-1,1,10  
 SM RDEC+6,2,10

SM DECAX,1,10  
 BNZ RDEC

AM RDEC+6,2,10  
 CF RDEC+6,,6

CF DECA  
 A DECS-1,DECL

DECSRRTFM DECX,DECA

S DECX,DECL  
 S DECX,DECL

TDM DEC1+10,0,11  
 BNF #+36,DECS-1,11

TDM DECA-1,7  
 TDM DEC1+10,2,11

TF DECX,DEC1+11,6

AM DECX,2,10  
 BD DOUT,DECX,11

DEC1 TFM DECX,0,610  
 AM DECX,2,10

BNR DEC1-12,DECX,11

DOUT BB

DORG \*-8

DS 12

DECA DAS 1

PAGE 17 Z 19610  
 Z 19620  
 Z 19630  
 Z 19640

TOTAL TEST PER COURSE  
 STUDENTS SCORE  
 MEAN FOR EACH GROUP  
 CONTAINS THE MAXIMUM SCORE  
 NUMBER RIGHT\*10000 + SCORE  
 NUMBER OF QUESTION ANSWERED INCORRE  
 NUMBER OF QUESTION OMITTED

19650  
 19660  
 19670  
 19680  
 19690  
 19700  
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 19720  
 19730

19740  
 19750  
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20200

\* UNIV. OF MISS. TEST SCORING PROGRAM (UMTS) PAGE 18  
 \* VERSION - A  
 \* BY RICHARD D ROSS  
 \*  
 DC 2,0-  
 DECA DC 2,0  
 DECX DS 5  
 DECL DC 2,0,DEC1+9  
 \* SQUARE ROOT SUBROUTINE  
 DS 10  
 SQRSUBTF HX,AAA  
 AAA DS ,SQRSUB-1  
 TFM XA,1  
 S AAA,AAA  
 SQRS S HX,XA  
 BNP SQRT  
 AM AAA,1,10  
 AM XA,2,10  
 B SQRS  
 DORG \*-4  
 SQRT CM HX,0,10  
 BNE \*+24  
 AM AAA,1,10  
 TF SDC,AAA  
 BB  
 DORG \*-9  
 HX DC 8,0  
 XA DC 5,0  
 \* END OF SUBROUTINE  
 \* SUBROUTINE TO ZERO TAB1, TAB2,FREQ, AND FREQT  
 \* ZERO TABLES OF TOTAL QUESTIONS ANSWERED CORRECTLY  
 DS 5  
 ZRO S ADN,ADN  
 AM ADR,TAB1-3+1  
 S ADN,QUES  
 ZRA TR ADR,TABZ-3,6  
 AM ADN,20001  
 BD ZRA,ADN-2  
 \* ZERO FREQUENCY TABLE  
 S ADN,ADN  
 AM ADR,FREQ-3+1  
 SM ADN,21,10  
 ZRC TR ADR,TABZ-3,6  
 AM ADN,20001  
 BD ZRC,ADN-2  
 BB  
 DORG \*-9  
 \* END OF SUBROUTINE  
 ERR6 DAC 18,QUESTIONS OMITTED-  
 RCON DC 2,00  
 DC 2,00  
 DC 2,42  
 DC 2,43  
 DC 2,44  
 DC 2,45  
 RCONX DC 2,00  
 NOMIT DSB 3,SIZE,,,  
 \* DIVIDE SUBROUTINE  
 DS 5  
 DIV BD DIVK,DIVD

QUESTIONS OMITTED

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\* UNIV. OF MISS. TEST SCORING PROGRAM (UMTS) PAGE 19  
 \* VERSION - A  
 \* BY RICHARD D ROSS  
 \*  
 20250  
 20260  
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 20290  
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 20790  
 20800

BB  
 DORG \*-9  
 DIVK TF DIVJ+11,DIV-1  
 AM DIV-1,22,10  
 TD 80,DIV-1,11  
 TD DIV-1,RM,6  
 DIVJ TR D1X-4,\*  
 TD DIV-1,80,6  
 TF DIVA,Z10+2  
 AM D1X,DIVA-99  
 TF D1X,D2X,611  
 TF DIVB,D4X,11  
 SM D1X,DIVA+1  
 TF DIVC,D1X  
 CF DIVC  
 TF D3N+11,DIVC  
 TF D3N+6+12,D3X  
 AM D1X,DIVA+1  
 SM D3X,1,10  
 TF 99,Z10+10  
 CM D3X,90,10  
 BP DIVV  
 AM DIVC,4,10  
 SM D1X,4,10  
 DIVV S D1X,DIVB,6  
 BN DBN  
 AM D3X,1,610  
 B DIVV  
 DBN A D1X,DIVB,6  
 CF D1X,,6  
 AM D3X,1,10  
 AM D1X,1,10  
 SM DIVC,1,10  
 BNZ DIVV  
 D3N SM D3N+12+6,\*  
 SF 100-3-4  
 B DIV-1,,6  
 DORG \*-4  
 D1X DSA 99  
 D2X DSA 0  
 DS 2  
 D3X DSA 100-3  
 D4X DSA 0  
 DS 1  
 DIVA DS 12  
 DIVB DS 10  
 DIVC DC 5,0  
 ZZZZZDS 1  
 DEND START

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SYMBOL TABLE (20K)  
130 QUESTIONS

ZZZZZZ	19993	THRUUA	12870	SQRSUB	18762	RIGHTT	13884	DECSRR	18568
CHECKA	12798	AAA	18761	ADN	09798	ADR	09795	ANS	08499
ANSZ	09800	APA	16536	APB	16548	APC	16572	APCC	16216
APD	16604	APDD	16652	APNX	02680	ARN1	10652	ARN11	10676
ARN3	02844	ARN4	02856	ARN6	10820	ARN7	11240	AST	17501
ATDE	17629	A14	18364	A8	18268	BA	12202	BFF	11172
BL	08477	BLANK	00681	BLC	08480	BNF	11116	BNFF	11152
BN1	13490	BN2	11830	BN3	11866	BN6	12118	BN66	12190
CARD	08471	CHECK	13848	CID	18312	CIDC	18322	CKA	11529
CKB	11549	CN	11574	CONA	11504	CONB	11514	COUR	18338
COURC	18346	COURR	18354	CQN	11551	CT	11576	DBN	19840
DECA	18741	DECAX	18745	DECL	18697	DECS	18388	DECSR	18424
DECX	18750	DEC1	18688	DIV	19514	DIVA	19977	DIVB	19987
DIVC	19992	DIVD	00509	DIVJ	19576	DIVK	19528	DIVV	19792
DOUT	18724	D1X	19947	D2X	19952	D3N	19912	D3X	19959
D4X	19964	ERRA	12542	ERRAA	12578	ERRF	17456	ERR1	17781
ERR2	17845	ERR3	17919	ERR4	18013	ERR5	18069	ERR6	19069
ERR7	13559	FREQ	09813	FREQT	10234	GRA	00477	GRB	00487
HA	00853	HB	01015	HC	01177	HCAA	12614	HCAA	12626
HCT	12694	HD	01339	HE	01501	HG2	18375	HOLD	12903
HP20	13596	HP24	12354	HP36	02728	HX	18911	H22	18225
H24	17396	H322	14604	H44	01663	H488	14724	H522	14628
H588	14508	H722	14700	H822	14556	J	00407	JA	13206
K	00417	L	00427	LCARD	17376	LOOP	13704	LOOPA	12766
M	00437	MAXS	18273	MEAN	18260	MEN	17615	MM	00457
N	00447	NAME	00561	NCARD	00003	NG	17671	NINE	00679
NMM	08483	NN	00467	NOCK	13980	NOMIT	19120	NOMZ	13800
NUMT	17581	OMIT	18286	PCOUR	15976	POUT	15652	PSA	15268
PSB	15412	PSEA	14848	PSEC	14884	PSECS	14804	PSS	15064
PSX	15004	QC	11579	QQ	00512	QUES	08474	RAD	12398
RAD24	12470	RCNN	16396	RCON	19105	RCONX	19117	RDEC	18460
READ	01684	RED	12410	RIGHT	18280	RM	08306	ROSP	17000
ROUT	17044	ROUTT	17024	RPUT	17256	RR	11608	RRC	11645
RRCC	18302	RRCP	11627	RTR	11650	RTT	17068	RTZ	00504
RT1	00506	RT2	00508	SC	18256	SDC	00497	SEC	18326
SECC	18330	SETUP	13212	SIZE	00130	SQRS	18798	SQRT	18854
START	01672	STAT	01708	STT	11024	STUD	11782	TABZ	08289
TAB1	03087	TAB2	05688	TAS	18179	TBC	00409	TCNT	18382
TESTA	18249	TESTB	18253	THR	13920	THRA	12834	THRU	13908
THRUA	12822	THRU	13956	TNF	00510	TOUT	16892	TTN	16180
WET	10748	WRONG	18283	WT	11651	WTI	11530	WW	00514
X	00517	XA	18916	XCOUR	17440	XNAME	18365	XSAVE	17432
XSEC	17434	XSECA	17436	XSECB	17438	XTOT	17446	Y	08309
ZERO	00839	ZRA	18958	ZRB	02488	ZRC	19030	ZRD	02560
ZRE	02572	ZRF	02928	ZRG	02976	ZRJ	10808	ZRM	11938
ZRN	11926	ZRO	18922	ZRP	03036	ZRR	11416	ZRRX	11452
ZRZ	02416	ZSS	11312	Z10	00689	Z13	00692	Z18	00697
Z7	00686	Z8	00687	Z5X	18377	Z HA	00853	Z HB	01015
Z HC	01177	Z HD	01339	Z HDHD	01905	Z HE	01501	Z H1	01933
Z H2	01997	Z H22	02087	Z H4	01759	Z H44	02077	Z H5	01777
Z H6	01793	Z NMM	00843	Z ROSS	01663	Z START	02108	Z X	00517
Z ZERO	00839								00839

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SYMBOL TABLE (40K)  
485 QUESTIONS

ZZZZZZ	39861	THRUUA	30974	SQRSUB	37566	RIGHTT	32688	DECSRR	37372
CHECKA	30902	AAA	37565	ADN	27548	ADR	27545	ANS	22699
ANSZ	27550	APC	35340	APB	35352	APC	35376	APCC	35020
APD	35408	APD	35456	APN	02680	ARN1	28402	ARN11	28426
ARN3	02844	ARN4	02856	ARN6	28570	ARN7	28990	AST	36305
ATDE	36433	A14	37168	A8	37072	BA	30306	BFF	28922
BL	22677	BLANK	00681	BLC	22680	BNF	28866	BNFF	28902
BN1	32294	BN2	29934	BN3	29970	BN6	30222	BN66	30294
CARD	22671	CHECK	32652	CID	37116	CIDC	37126	CKA	29279
CKB	29299	CKB	29294	CONA	29254	CONB	29264	COUR	37142
COURC	37150	COURR	37158	CQN	29301	CT	29326	DBN	39708
DECA	37545	DECA	37549	DECL	37501	DECS	37192	DECSR	37228
DECX	37554	DECX	37594	DIV	39382	DIVA	39845	DIVB	39855
DIVC	39860	DIVD	00509	DIVJ	39444	DIVK	39396	DIVV	39660
DOUT	37528	D1X	39815	D2X	39820	D3N	39780	D3X	39827
D4X	39832	D4X	30646	ERRA	30682	ERRF	36260	ERR1	36585
ERR2	36649	ERR2	36723	ERR4	36817	ERR5	36873	ERR6	37873
ERR7	32363	FREQ	27563	FREQT	27984	GRA	00477	GRB	00487
HA	00853	HB	01015	HC	01177	HCAA	30718	HCAA	30730
HCT	30798	HCT	30798	HE	01501	HE	37179	HOLD	31007
HP20	32400	HP24	30458	HP36	02728	HX	37715	H22	37029
H24	36200	H322	33408	H44	01663	H488	33528	H522	33432
H588	33312	H722	33504	H822	33360	J	00407	JA	32010
K	00417	K	00417	LCARD	36180	LOOP	32508	LOOPA	30870
M	00437	M	00437	MAXS	37077	MEAN	37064	MEN	36419
N	00447	N	00447	NAME	00561	NCARD	00110	NG	36475
NMM	08483	NN	00467	NOCK	32784	NOMIT	37924	NOMZ	32604
NUMT	17581	OMIT	18286	PCOUR	34780	POUT	34456	PSA	34072
PSB	15412	PSEA	14848	PSEC	33688	PSS	33868	PSS	33868
PSX	15004	QC	00512	QUES	32608	SECC	33608	SECD	33608
RAD24	12470	RCNN	35200	RCON	37909	RCONX	37921	RDEC	37264
READ	01684	RED	30514	RIGHT	37084	RM	22506	ROSP	35804
ROUT	17044	ROUTT	35828	RPUT	36060	RR	29358	RRC	29395
RRCC	18302	RRCP	29377	RTR	29400	RTT	35872	RTZ	00504
RT1	00506	RT2	00508	SC	37060	SDC	00497	SEC	37130
SECC	18330	SETUP	32016	SIZE	00485	SQRS	37602	SQRT	37658
START	01672	START	01708	STAT	01708	STT	28774	STUD	29886
TAB1	03087	TAB2	12788	TAS	36983	TBC	00409	TCNT	37186
TESTA	30703	TESTB	30705	THR	32724	THRA	30938	THRU	32712
THRUA	30926	THRU	32760	TNF	00510	TOUT	35696	TTN	34984
WET	28498	WRONG	37087	WT	29401	WT	29280	WW	00514
X	00517	XA	37720	XCOUR	36244	XNAME	37169	XSAVE	36236
XSEC	36238	XSEC	36240	XSECB	36242	XTOT	36250	Y	22509
ZERO	00839	ZRA	37762	ZRB	02488	ZRC	37834	ZRD	02560
ZRE	02572	ZRF	02928	ZRG	02976	ZRJ	28558	ZRM	30042
ZRN	11926	ZRO	03036	ZRR	03030	ZRP	03036	ZRR	29166
ZRZ	02416	ZSS	11312	Z10	00689	Z18	00697	Z10	00689
Z7	00686	Z8	00687	Z5X	18377	Z HA	00853	Z HB	01015
Z HC	01177	Z HD	01339	Z HE	01501	Z H1	01933	Z HDHD	01905
Z H2	01997	Z H22	02087	Z H4	01759	Z H44	02077	Z H5	01777
Z H6	01793	Z NMM	00843	Z ROSS	01663	Z START	02108	Z X	00517
Z ZERO	00839								00839

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SYMBOL TABLE (60K)  
500 QUESTIONS

ZZZZZZ	40673	THRUUA	31740	SQRSUB	38332	RIGHTT	33454	DECSR	38138
CHECKA	31668	AAA	38331	ADN	28298	ADR	28295	ANS	23299
ANSZ	28300	APA	36106	APB	36118	APC	36142	APCC	35786
APD	36174	APDD	36222	APNX	02680	ARN1	29152	ARN11	29176
ARN3	02844	ARN4	02856	ARN6	29320	ARN7	29740	AST	37071
ATDE	37199	A14	37934	A8	37838	BA	31072	BFF	29672
BL	23277	BLANK	00681	BLC	23280	BNF	29616	BNFF	29652
BN1	33060	BN2	30700	BN3	30736	BN6	30988	BN66	31060
CARD	23271	CHECK	33418	CID	37882	CIDC	37892	CKA	30029
CKB	30049	CN	30074	CONA	30004	CONB	30014	COUR	37908
COURC	37916	COURR	37924	CQN	30051	CT	30076	DBN	40520
DECA	38311	DECAX	38315	DECL	38267	DECS	37958	DECSR	37994
DECX	38320	DEC1	38258	DIV	40194	DIVA	40657	DIVB	40667
DIVC	40672	DIVD	00509	DIVJ	40256	DIVK	40208	DIVV	40472
DOUT	38294	DIX	40627	D2X	40632	D3N	40592	D3X	40639
D4X	40644	ERRA	31412	ERRAA	31448	ERRF	37026	ERR1	37351
ERR2	37415	ERR3	37489	ERR4	37583	ERR5	37639	ERR6	38639
ERR7	33129	FREQ	28313	FREQT	28734	GRA	00477	GRB	00487
HA	00853	HB	01015	HC	01177	HCA	31484	HCAA	31496
HCT	31564	HD	01339	HE	01501	HG2	37945	HOLD	31773
HP20	33166	HP24	31224	HP36	02728	HX	38481	H22	37795
H24	36966	H322	34174	H44	01663	H488	34294	H522	34198
H588	34078	H722	34270	H822	34126	J	00407	JA	32776
K	00417	L	00427	LCARD	36946	LOOP	33274	LOOPA	31636
M	00437	MAXS	37843	MEAN	37830	MEN	37185	MM	00457
N	00447	NAME	00561	NCARD	00010	NG	37241	NINE	00679
NMM	00843	NN	00467	NOCK	33550	NOMIT	38690	NOMZ	33370
NUMT	37151	OMIT	37856	PCOUR	35546	POUT	35222	PSA	34838
PSB	34982	PSEA	34418	PSEC	34454	PSECS	34374	PSSS	34634
PSX	34574	QC	30079	QQ	00512	QUES	23274	RAD	31268
RAD24	31340	RCNN	35966	RCON	38675	RCONX	38687	RDEC	38030
READ	01684	RED	31280	RIGHT	37850	RM	23106	ROSP	36570
ROUT	36614	ROUTT	36594	RPUN	36826	RR	30108	RRC	30145
RRCC	37872	RRCP	30127	RTR	30150	RTT	36638	RTZ	00504
RT1	00506	RT2	00508	SC	37826	SDC	00497	SEC	37896
SECC	37900	SETUP	32782	SIZE	00500	SQRS	38368	SQRT	38424
START	01672	STAT	01708	STT	29524	STUD	30652	TABZ	23089
TAB1	03087	TAB2	13088	TAS	37749	TBC	00409	TCNT	37952
TESTA	37819	TESTB	37823	THR	33490	THRA	31704	THRU	33478
THRUA	31692	THRUU	33526	TNF	00510	TOUT	36462	TTN	35750
WET	29248	WRONG	37853	WT	30151	WTT	30030	WW	00514
X	00517	XA	38486	XCOUR	37010	XNAME	37935	XSAVE	37002
XSEC	37004	XSECA	37006	XSECB	37008	XTOT	37016	Y	23109
ZERO	00839	ZRA	38528	ZRB	02488	ZRC	38600	ZRD	02560
ZRE	02572	ZRF	02928	ZRG	02976	ZRJ	29308	ZRM	30808
ZRN	30796	ZRO	38492	ZRP	03036	ZRR	29916	ZRRX	29952
ZRZ	02416	ZSS	29812	Z10	00689	Z13	00692	Z18	00697
Z7	00686	Z8	00687	25X	37947	Z HA	00853	Z HB	01015
Z HC	01177	Z HD	01339	Z HDHD	01905	Z HE	01501	Z H1	01933
Z H2	01997	Z H22	02087	Z H4	01759	Z H44	02077	Z H5	01777
Z H6	01793	Z NMM	00843	Z ROSS	01663	Z START	02108	Z X	00517
Z ZERO	00839								